

FAA-04-19176-5

Federal Register Information

[Federal Register: September 18, 2000]

[Page 56233]

DEPT OF TRANSPORTATION
DOCKETS

65 FR 56233

2001 SEP 30 A 10:04

Header Information

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [65 FR 56233 9/18/2000]

2000-19-02

[Docket No. 2000-NM-300-AD; Amendment 39-11903; AD ~~2000-19-02~~]

RIN 2120-AA64

Airworthiness Directives; Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model EMB-135 and EMB-145 Series Airplanes

PDF Copy (If Available):

Preamble Information

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that is applicable to all EMBRAER Model EMB-135 and EMB-145 series airplanes. This action requires repetitive inspections of the electrical connectors of the electric fuel pumps to detect discrepancies, and follow-on corrective actions. This action is necessary to prevent failure of the electrical connectors of the fuel pumps, which could result in fuel leakage from the connectors or electrical arcing across the connector pins of the pump, and consequent fuel fire or explosion.

DATES: Effective October 3, 2000.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of October 3, 2000.

Comments for inclusion in the Rules Docket must be received on or before October 18, 2000.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2000-NM-300-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056. Comments may be inspected at this location between 9:00 a.m. and 3:00 p.m., Monday through Friday, except Federal holidays. Comments may be submitted via fax to (425) 227-1232. Comments may also be sent via the Internet using the following address: 9-anm-iarcomment@faa.gov. Comments sent via the Internet must contain "Docket No. 2000-NM-300-AD" in the subject line and need not be submitted in triplicate. Comments sent via fax or the Internet as attached electronic files must be formatted in Microsoft Word 97 for Windows or ASCII text.

The service information referenced in this AD may be obtained from Empresa Brasileira de Aeronautica S.A. (EMBRAER), P.O. Box 343 - CEP 12.225, Sao Jose dos Campos - SP, Brazil. This information may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or

X-REF AD

at the FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Linda M. Haynes, Aerospace Engineer, Airframe and Propulsion Branch, ACE-117A, FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia 30337-2748; telephone (770) 703-6091; fax (770) 703-6097.

SUPPLEMENTARY INFORMATION: The Departamento de Aviacao Civil (DAC), which is the airworthiness authority for Brazil, notified the FAA that an unsafe condition may exist on all EMBRAER Model EMB-135 and EMB-145 series airplanes. The DAC advises that it received a report of damage to the pins and elastomeric inserts in the hermetically sealed wire connectors of the electrical fuel pumps located in the main wing fuel tanks. Such damage can lead to the failure of certain electrical connectors due to heat generation caused by erosion of the connectors and subsequent arcing across the connector pins of the fuel pump. This condition, if not corrected, could result in fuel fire or explosion.

Explanation of Relevant Service Information

The manufacturer has issued Embraer Alert Service Bulletin S.B. 145-28-A013, dated August 16, 2000, which describes procedures for repetitive visual inspections of the electrical connectors of the fuel pumps to detect discrepancies (including blackened connector pins, damage to elastomeric insert, cracks, erosion or charring), and follow-on corrective actions. The follow-on actions consist of replacement of the fuel pump if discrepancies are detected, inspection of mating airplane connectors for damage, and replacement of the airplane connectors with new connectors, if damaged. Additionally, if there are no discrepancies, the service bulletin specifies replacement of the socket contacts of the connectors with new contacts. The service bulletin references the Embraer Wiring Manual which describes procedures for replacement of the connectors and socket contacts; and the Embraer Airplane Maintenance Manual which describes procedures for replacement of the fuel pump.

The DAC classified this alert service bulletin as mandatory and issued Brazilian airworthiness directive 2000-08-01, dated August 25, 2000, in order to assure the continued airworthiness of these airplanes in Brazil.

FAA's Conclusions

These airplane models are manufactured in Brazil and is type certificated for operation in the United States under the provisions of section 21.29 of the Federal Aviation Regulations (14 CFR 21.29) and the applicable bilateral airworthiness agreement. Pursuant to this bilateral airworthiness agreement, the DAC has kept the FAA informed of the situation described above. The FAA has examined the findings of the DAC, reviewed all available information, and determined that AD action is necessary for products of this type design that are certificated for operation in the United States.

Explanation of Requirements of Rule

Since an unsafe condition has been identified that is likely to exist or develop on other airplanes of the same type design registered in the United States, this AD is being issued to prevent failure of the electrical connectors of the fuel pumps, which could result in leakage of fuel from the electrical connector or electrical arcing across the connector pins of the pump, and consequent fuel fire or explosion. This AD requires repetitive inspections of the electrical connectors of the fuel pumps to detect discrepancies, and follow-on corrective actions. The actions are required to be accomplished in accordance with the alert service bulletin described previously, except as discussed below.

Interim Action

This is considered to be interim action. The manufacturer has advised that it currently is developing a modification that will positively address the unsafe condition addressed by this AD. Once this modification is developed, approved, and available, the FAA may consider additional rulemaking.

Differences Between Rule and Related Service Information

Operators should note that although the alert service bulletin specifies replacement of the electric fuel pump only where greater than 30% of the wire connector pin surface is blackened, discolored, or charred, this AD mandates replacement of the fuel pump if any discrepancies (including blackened connector pins, damage to elastomeric insert, cracks, erosion or charring), are detected.

The FAA has determined that, because of the safety implications and consequences associated with any blackening, discoloration, or charring (which are indicative of electrical arcing and a possible ignition source in close proximity to the fuel tank), any discrepant fuel pump and its mating airplane connector must be replaced before further flight.

The alert service bulletin specifies accomplishment of the repetitive inspections every 400 flight hours or at the next 'A' check. The FAA finds that such a compliance time will not ensure that the repetitive inspections are accomplished in a timely manner. In developing an appropriate compliance time for the inspections, the FAA considered not only the manufacturer's recommendation, but the degree of urgency associated with addressing the subject unsafe condition, as well as the compliance time for the actions required. The FAA finds accomplishment of the repetitive inspections at intervals not to exceed 400 flight hours after accomplishment of the initial inspection, as specified in the Brazilian airworthiness directive, to be warranted, in that those intervals represent an appropriate amount of time allowable for affected airplanes to continue to operate without compromising safety.

Determination of Rule's Effective Date

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications shall identify the Rules Docket number and be submitted in triplicate to the address specified under the caption "ADDRESSES." All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Submit comments using the following format:

- Organize comments issue-by-issue. For example, discuss a request to change the compliance time and a request to change the service bulletin reference as two separate issues.
- For each issue, state what specific change to the AD is being requested.
- Include justification (e.g., reasons or data) for each request.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this rule must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2000-NM-300-AD." The postcard will be date stamped and returned to the commenter.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have

federalism implications under Executive Order 13132.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and that it is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979).

If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES."

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows: PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows: Authority: 49 U.S.C. 106(g), 40113, 44701. § 39.13 [Amended]
2. Section 39.13 is amended by adding the following new airworthiness directive:

Regulatory Information

2000-11-11 EMPRESA BRASILEIRA DE AERONAUTICA S.A. (EMBRAER): Amendment 39-11903.
Docket 2000-NM-300-AD.

Applicability: All Model EMB-135 and EMB-145 series airplanes, certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent failure of the electrical connectors of the fuel pumps, which could result in fuel leakage from the connectors or electrical arcing across the connector pins of the pump, and consequent fuel fire or explosion; accomplish the following:

Repetitive Inspections

(a) Perform a general visual inspection of the electrical connectors of the fuel pumps in the right- and left-hand wings to detect discrepancies (including blackened connector pins, damage to elastomeric insert, cracks, erosion or charring), in accordance with Embraer Alert Service Bulletin S.B. 145-28-A013, dated August 16, 2000, at the times specified in paragraphs (a)(1), (a)(2), and (a)(3) of this AD, as applicable. Repeat the inspection thereafter at intervals not to exceed 400 flight hours.

(1) For airplanes having 1,200 total flight hours or less as of the effective date of this AD: Prior to the accumulation of 1,600 total flight hours.

(2) For airplanes having more than 1,200 total flight hours, but less than 4,000 total flight hours as of the effective date of this AD: Within 400 flight hours after the effective date of this AD.

(3) For airplanes having 4,000 total flight hours or more as of the effective date of this AD: Prior to the accumulation of 4,400 total flight hours or within 50 flight hours after the effective date of this AD, whichever occurs later.

Master Minimum Equipment List (MMEL)

(b) The inspection required by paragraph (a) of this AD applies to the six electric fuel pumps in the right- and left-hand wings (three pumps in each wing). For pump replacement planning purposes, the airplane may be operated in accordance with the provisions and limitations specified in an operator's FAA-approved MMEL, provided that no more than one fuel pump on each wing on the airplane is inoperative.

Note 2: When operating under the MMEL, the unusable fuel quantity as referenced in the Limitations Section of the appropriate FAA-approved Airplane Flight Manual (AFM) must be complied with.

Follow-On Corrective Actions

(c) If any discrepancy (including blackened connector pins, damage to elastomeric insert, cracks, erosion or charring) is detected after accomplishment of any inspection required by paragraph (a) of this AD: Before further flight, replace the fuel pump and its mating airplane connector in accordance with Embraer Alert Service Bulletin S.B. 145-28-A013, dated August 16, 2000.

(d) After accomplishment of the replacement required by paragraph (c) of this AD, before further flight: Perform a general visual inspection of the electrical connectors adjacent to the fuel pump to detect damage (visible cracks, erosion or charring), in accordance with Embraer Alert Service Bulletin S.B. 145-28-A013, dated August 16, 2000, and accomplish the requirements in paragraph (c)(1) or (c)(2) of this AD, as applicable.

(1) If any damage is detected, before further flight, replace the connectors with new ones in accordance with the alert service bulletin.

(2) If no damage is detected, before further flight, replace only the socket contacts with new contacts in accordance with the alert service bulletin.

Alternative Methods of Compliance

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Atlanta Aircraft Certification Office (ACO), FAA. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Atlanta ACO.

Note 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Atlanta ACO.

Special Flight Permits

(f) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(g) The actions shall be done in accordance with Embraer Alert Service Bulletin S.B. 145-28-A013, dated August 16, 2000. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from

Airworthiness Directives

Empresa Brasileira de Aeronautica S.A. (EMBRAER), P.O. Box 343 - CEP 12.225, Sao Jose dos Campos - SP, Brazil. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Note 4: The subject of this AD is addressed in Brazilian airworthiness directive 2000-08-01, dated August 25, 2000.

(h) This amendment becomes effective on October 3, 2000.

Footer Information

Issued in Renton, Washington, on September 8, 2000.
Donald L. Riggan,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.

Service Bulletin Information

Service Bulletin for the Lotus Notes Client:

Comments
